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Colorado Fungi. (new species.)—By Chas. H. Peck.—The species of fungi here described were collected in Colorado by *Mr. T. S. Brandegee*, and forwarded to me for examination by *Mr. E. S. Rau*, of Bethlehem, Pennsylvania.

Sphæropsis Raui, *Pk.*—Spots indefinite, brown; perithecia numerous, gregarious, minute, phomatoid, sub-membranaceous, black, .006-.007 inch in diameter; spores obovate or oblong, colorless, .00065-.00075 inch long.

Living leaves of *Artemisia scopulorum*, Gray.

Lecythea speciosa, *Pk.*—Spots suborbicular, one to two lines in diameter, yellow; sori few, crowded, prominent, hypophyllous. orange-colored; abortive spores elongated, curved, obtuse, nearly cylindrical; spores sublogose or elliptical, .001- 0012 inch long, rough, the endochrome bright orange.

Living leaves of *Rubus deliciosus*, Torr.

This is probably the early or Uredo form of some species of Phragmidium which should be sought later in the season. It is distinguished from its allies by the deep orange color of the sori, and the narrow elongated abortive spores.

Æcidium Brandegei, *Pk.*—Peridia amphigenous, scattered or aggregated, sometimes seriately placed, elongated; spores subglobose, orange colored, .0008-.001 inch in diameter.

Living stems and leaves of *Asclepias verticillata*, L.

The peridia resemble those of *Æ. Thalictri*, but the spores and habit of the plant are quite different. It occupies the stem and leaves in patches of considerable extent and changes the aspect of the host plant.

Æcidium hemisphæricum, *Pk.*—Peridia prominent, scattered or crowded, hemispherical, opening by a small aperture; spores orange, subglobose or elliptical, .0008-.001 inch long, the epispore thick, hyaline.

Living stems and leaves of *Mulgedium pulchellum*, Nutt.

The peridia are generally more scattered on the stem than on the leaves, the whole lower surface of which is often occupied by them.

Æcidium porosum, *Pk.*—Spots none; cups crowded, deep-seated, broad, wide-mouthed, occupying the whole lower surface of the leaf to which they give a porous appearance; spores orange-colored, sub-angular, .0008-.001 inch in length.

Living leaves of *Vicia Americana*, Muhl.

This species is quite distinct, both in its spores and in the size and character of the peridia, from *Æ. album*, Clinton, which also inhabits *Vicia Americana.*

Æcidium abundans, *Pk.*—Spots yellow, numerous, small, sub-orbicular, sometimes confluent; peridia few, hypophyllous, sub-circinating, pustulate; spores sub-globose, orange, .001 inch in diameter; spermogonia on both sides of the leaf on the same or on different spots.

Living leaves of *Symphoricarpus oreophilus.*

The leaves of the host plant are beautifully mottled by the spots. The peridia in the specimens seen are nearly all closed, from which it is probable that they are scarcely mature.

Æcidium Bigeloviæ, *Pk.*—Spots thickened, yellow; peridia pustulate, hemispherical, opening by a small aperture; spores sub-globose, bright yellow or orange, .001-.0013 inch in diameter.

Living stems and leaves of *Bigelovia Douglasii*, Gray.

The peridia resemble those of *Æ. hemisphæricum*, but the species is at once distinguished by the yellow spots and larger spores.

Uromyces hyalinus, *Pk.*—Spots none; sori numerous, hypophyllous, at first covered by the hyaline membranous epidermis, at length exposed, effused, nearly or quite occupying the whole lower surface of the leaf, ferruginous-brown; spores ovate or oblong-ovate, umbonate at the apex, .001-.0013 inch long; pedicel hyaline, short.

Living leaves of *Sophora sericea*, Pursh.

Mr. Brandegee remarks concerning this fungus that it is very common at Canon City, about one-half the Sophora plants being affected by it. The plants attacked by it become more erect in habit and do not blossom. The sori sometimes occur sparingly on the upper surface of the leaf also. The specific name is suggested by the hyaline membrane that at first covers them.

Puccinia nigrescens, *Pk*—Spots none; sori rather prominent, cauline, oblong, blackish-brown or black; spores smooth, elliptical or oblong, obtuse or bluntly pointed, slightly constricted at the septum, .0015-.0018 inch long, .0008-.001 broad; pedicel colorless, two to four times as long as the spore.

Stems and branches of *Salvia lanceolata*, Willd.

No leaves of the host plant accompanied the specimens sent, so that I am not able to say whether the fungus ever attacks the leaves or not.

The two following species have been received from the sources given at the end of the descriptions:

Diatrypella Frostii. *Pk.*—Stroma verrucæform, rather prominent, convex or hemispherical, scarcely one line broad, sometimes confluent, partly covered by the closely adhering fragments of the ruptured epidermis, black externally, greenish within, forming a white spot on the wood beneath; perithecia sub-globose, generally ten to fifteen; ostiola obscure; asci sub-cylindrical, scarcely pedicellate, polysporous; spores yellowish in the mass, cylindrical, curved, .00025-.00035 inch long.

Dead maple branches. Brattleborough, Vermont. *C. C. Frost.*

Externally this fungus resembles small forms of *Diatrypella verrucæformis*, from which it is easily separated by the greenish color of the stroma. *D. betulina*, which also has a greenish stroma, differs from this species in the larger size, different form and naked disk.

Sorosporium Desmodii, *Pk.*—Spore balls irregular or sub-globose, compact, rough, .0012-0016 inch in diameter, color in the mass reddish-brown inclining to cinnamon; spores sub-globose, rough, .0006-.0007 inch in diameter, four to ten in a group, not easily separating from each other.

Seeds of *Desmodium acuminatum*, DC. Closter, New Jersey. *C. F. Austin.* September.

I am not aware that any representative of this genus has before been detected in the United States. Nor is it surprising that this species has so long escaped notice, for the fungus is wholly concealed, being produced in the seeds while they are yet inclosed in the pod. For a time there is no external evidence of the presence of the fungus, but at length a slight discoloration of the part of the pod immediately over the affected seeds indicates that all is not right within.

The whole seed, except perhaps the thin external coat, appears to be transformed into the fungus spores. The color of these is similar to that of the spores of *S. Saponariæ*, but the spore masses are smaller and less easily separated into their component spores. Every seed in a pod and nearly every pod on an affected plant, so far as shown by the specimens sent me, is attacked. From this it would appear that the fungus must be quite effective in preventing the increase of this Desmodium by the seed in localities where it abounds.

More about Lobelias.—In the April number (1877) of the Gazette I mentioned having found a white plant of *Lobelia syphilitica*. I now have to report not only a *red* flowered plant of the same species, (differing in no particular, except in color, from the common form,) but a remarkable plant which appears to be a hybrid between *L. syphi-*